

DEFENSE THREAT REDUCTION AGENCY Scientific & Technical Review Information

PA CONTROL NUMBER:

PA 11-113 8 Feb 11

SUSPENSE: 1 March 2011

PM / PHONE / EMAIL:

Nicole Whealen 767.6354

DATE: 1 February 2011

BRANCH CHIEF / PHONE / EMAIL:

DATE:

DIVISION CHIEF / PHONE:

DATE:

DIRECTORATE / DIRECTOR / PHONE:

John Byrd 767.578

DATE:

ENTERPRISE / OFFICE / PHONE:

DATE:

PUBLIC AFFAIRS:

Richard M. Cole (Chief, PA) / J. Cairnes

DATE:

1. TITLE: Public Health Colloquium Conference Report

CONTRACT NUMBER

ORIGINATOR Vaughn, Oscar

2. TYPE OF MATERIAL: ☒ PAPER ☐ PRESENTATION ☐ ABSTRACT ☐ OTHER

3. OVERALL CLASSIFICATION: ☒ CONTRACTOR UNCLASS ☒ PROJECT MANAGER UNCLASS

A. Review authority for unclassified material is the responsibility of the PM. Your signature indicates the material has undergone technical and security review.

B. Warning Notices/Caveats:

☐ RD ☐ FRD ☐ CNWDI ☐ NATO RELEASABLE
☐ SUBJECT TO EXPORT CONTROL LAWS

C. Distribution Statement:

☒

A. Approved for public release; distribution is unlimited (unclassified papers only).

☐

B. Distribution authorized to U.S. Government agencies only; (check the following):

☐ Contractor Performance Evaluation
☐ Foreign Government Information
☐ Administrative or Operational Use
☐ Specific Authority
☐ Premature Dissemination

☐ Proprietary Information
☐ Test and Evaluation
☐ Software Documentation
☐ Critical Technology

**CLEARED
for public release**

FEB 14 2011

**PA Ops
Defense Threat Reduction Agency**

☐

C. Distribution authorized to U.S. Government agencies and their contractors; (check the following):

☐ Critical Technology
☐ Specific Authority
☐ Administrative or Operational Use

☐ Software Documentation
☐ Foreign Government Information

☐

D. Distribution authorized to the Department of Defense and U.S. DoD Contractors only; (check the following):

☐ Foreign Government Information
☐ Critical Technology
☐ Administrative or Operational Use

☐ Software Documentation
☐ Foreign Government Information

☐

E. Distribution authorized to DoD Components only; (check the following):

☐ Administrative or Operational Use
☐ Premature Dissemination
☐ Critical Technology
☐ Foreign Government Information
☐ Direct Military Support

☐ Software Documentation
☐ Specific Authority
☐ Proprietary Information
☐ Test and Evaluation
☐ Contractor Performance Evaluation

☐

F. Further dissemination only as directed.

☐

X. Distribution authorized to U.S. Government agencies and private individuals or enterprises eligible to obtain export-controlled technical data in accordance with DoD Directive 5230.25 (unclassified papers only).

4. MATERIAL TO BE: ☐ Presented ☒ Published Date Required:

Name of Conference or Journal:

Remarks: To be published on the ASCO website and distributed as needed.

Approved 14 Feb 11

Public Health Colloquium

CONFERENCE REPORT

March 24-25, 2010
Colorado Springs, Colorado

*The Center for Homeland Security
University of Colorado at Colorado Springs*

July 2010

The views expressed herein are those of the authors and do not necessarily reflect the official policy or position of the Defense Threat Reduction Agency, the Department of Defense, or the United States Government.

This report is approved for public release; distribution is unlimited.



**Defense Threat Reduction Agency
Advanced Systems and Concepts Office**

Report Number ASCO 2010 015
Contract Number DTRA01-03-D-0017, T.I. 18-09-05

The mission of the Defense Threat Reduction Agency (DTRA) is to safeguard America and its allies from weapons of mass destruction (chemical, biological, radiological, nuclear, and high explosives) by providing capabilities to reduce, eliminate, and counter the threat, and mitigate its effects.

The Advanced Systems and Concepts Office (ASCO) supports this mission by providing long-term rolling horizon perspectives to help DTRA leadership identify, plan, and persuasively communicate what is needed in the near term to achieve the longer-term goals inherent in the agency's mission. ASCO also emphasizes the identification, integration, and further development of leading strategic thinking and analysis on the most intractable problems related to combating weapons of mass destruction.

For further information on this project, or on ASCO's broader research program, please contact:

Defense Threat Reduction Agency
Advanced Systems and Concepts Office
8725 John J. Kingman Road
Ft. Belvoir, VA 22060-6201

ASCOInfo@dtra.mil

Public Health Colloquium Conference Report

The Center for Homeland Security at the University of Colorado at Colorado Springs (UCCS) hosted a two-day conference on March 24-25 2010 to address the challenges of managing and responding to a public health disaster. The colloquium, which was co-sponsored by U.S. Northern Command (USNORTHCOM) and the Defense Threat Reduction Agency's Advanced Systems and Concepts Office (DTRA/ASCO), emphasized the challenges facing interagency, intergovernmental, and non-governmental actors with respect to detection, information fusion, and strategic communications under the stress of a major public health crisis such as a pandemic. Ninety-one registered participants included officials from the the major U.S. government stakeholders in the Departments of Defense, Health and Human Services, and Homeland Security, as well as other federal, state, and local government and non-government public health professionals.

Keynote Addresses

The keynote speeches were given by General Victor E. Renuart, Jr. (USAF), Commander, NORAD – U.S. Northern Command, and Kevin Yeskey, M.D., Deputy Assistant Secretary and Director of Preparedness and Emergency Operations, Department of Health and Human Services.

General Renault offered the following observations.

- The addition of one word to NORAD-NORTHCOM mission – “anticipate” – led to a “revolution” in command preparedness.
- It is important to understand in-depth the nature and course of public health crises and the role of disaster medicine. Anticipation, collaboration, integration, and communication are the essential keys to success. There are challenges associated with the sharing of classified information.
- “*Plan events before they begin.*” Early detection, fusion of information, and pre-planned communication strategy helped “dodge a bullet” with respect to H1N1, even though anticipating pandemic events is not a core concept of most government agencies. Planning should aim to create “mega-communities” comprised of stakeholders whose organizational missions may vary but who need to align their missions and responsibilities along a common collective purpose in disaster response. NORAD-NORTHCOM interacts with 68 different government agencies daily as it tries to “lead from the middle.” Effective collaboration is all the more important when fiscal constraints are tighter.
- Collaboration between first responders and others who “arrive on the scene” is critical to saving lives. Accordingly, it is important to identify the “gaps and seams” that might hinder an effective response and the actionable remedies to these.

- In a disaster situation, the DoD likely will not be in the lead and uniformed military personnel likely will not be among the first responders. If and when they do arrive, military authorities need to have a sound understanding of the players, processes and concerns. Experience demonstrates this.
- Public complacency is a concern – “the longer we go between events, the less likely we’ll be ready for the next one.” While there is “good news” in our success in avoiding major terror attacks on the homeland, the public needs to understand that terrorists are still actively planning attacks intended to have a dramatic impact on our lives and freedoms.
- NORAD-NORTHCOM will establish a Center of Excellence in homeland defense partnered with the United States Pacific Command Center for Disaster Management.
- NORAD-NORTHCOM would like to partner with a university to establish a Ph.D. program in homeland security.

Dr. Yeskey addressed information requirements facing medical responders. The goals are to acquire information, analyze information, perform actions based on the information, and announce or disseminate information to appropriate actors through appropriate channels. Having the proper context is critical. Is this a terrorist event? What needs to be passed on to federal authorities? To others? Equally important is to have some sense of what the “end state” of the response effort should be; baselining possible disasters during the planning process can help. Better technology is required to increase situational awareness among all key actors and organizations.

Summary of Presentations

Mr. Pablo Mayrgundter, Google. Information Challenges for Crisis Response: Google.org Experiences from the Haitian Earthquake and Google Search Overview.

DARPA’s Network Challenge 2009 was a competitive exercise demonstrating that social networks of appropriate scale can form to use real-time internet search and communication tools to coordinate a focused group activity – in this case, the search for large red balloons tethered at ten locations across the country, easily visible from major roads.

In a real-world disaster, the January 2010 major earthquake in Haiti, dozens of “data silos” were quickly created (e.g., to assist in performing triage, track missing persons) but were not effectively linked. After three weeks on the ground, military and international civil authorities (UN) were still not sharing daily situation and area assessments. After two months, large-scale damage assessments by different organizations were just getting underway. There was no mechanism to facilitate common situational awareness (i.e., “situational dashboard”). A key lesson: scaling up these types of assessments to the required level is difficult.

Major General Steven Foster (USAF), Mobilization Assistant to the Commander, NORAD – NORTHCOM. *Rapid Decision Making in a Time-Constrained Environment.*

Decision making processes for disaster response must be agile. Command senior officials undergo training to develop capabilities for sound decision making under very tight timelines. Decision making is treated as a “learned skill” that can be mastered through practice and experience.

Keri Lubell, Ph.D., Centers for Disease Control and Prevention. *Monitoring News and Social Media During a Public Health Emergency.*

In emergency situations, media monitoring is labor-intensive and the volume of stories will almost always exceed capacity to collect and analyze in a timely way. Accordingly, choices must be made as to what to monitor and strategies must be sufficiently flexible to adapt to the changing course of the event. Media monitoring has multiple objectives – event surveillance, situational awareness, and communication surveillance (i.e., How is the event being portrayed?). Both news and social media need to be monitored. Monitoring must proceed from a number of key questions: Where is required information most likely to be available? Is the content proprietary? How critical are visuals? The selection of stories to monitor is the most challenging decision on any given day. Agencies must narrow their source list and prioritize by media type or outlet.

Analysis of media content must be framed by an understanding of the intended audience and the purposes for which the analysis will be used, as well as the best allocation of what may be limited time and staff resources. A communications surveillance report would be intended to inform an agency’s communication strategy. What are the major media themes, points of confusion, rumors and misinformation, issues likely to emerge in the days ahead? To the degree possible, reporting to leadership should occur on a regular cycle, supported by a direct dialogue with leadership.

Jon Ebinger, Independent Media Consultant. *News and Terrorism: Communicating in a Crisis.*

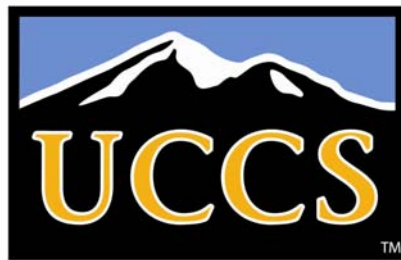
The Radio and Television Digital News Foundation, in association with the National Academies and the U.S. Department of Homeland Security, conducts an outreach program for journalists, public officials and scientists on media processes and communications strategies during crisis situations. The audiences include local business leaders, academics, and public health and medical officials. More than two thousand people have participated in workshops conducted in 18 cities since 2004. Some key lessons learned from these interactions include the following.

- Media organizations should maintain a database of experts who can be called on to provide accurate information during a public health crisis. Media outlets will not work through communications or public relations offices during a crisis. They will be seeking immediate assistance from experts.

- In a crisis, the public health community must be prepared to reach out to and maintain contact with the local media, and use the media as a resource for communicating with the public. This requires understanding what journalists are attempting to accomplish so that the exchange of information can benefit all.
- In addition to the traditional media, officials can communicate with the public through websites and social media. Social media can be a powerful conduit for information; using social media routinely will make it easier to leverage effectively during a crisis.
- Even a modest degree of planning can make a significant difference in limiting the consequences and costs of a public health crisis.

Breakout Sessions

A discussion-based exercise was conducted to address detection and fusion, notification and information needs, and strategic communications during a public health emergency. Breakout session reports and a complete after action report for the exercise are available as separate electronic files.



UNIVERSITY
· OF ·
COLORADO
AT COLORADO SPRINGS

NATIONAL INSTITUTE OF SCIENCE, SPACE & SECURITY CENTERS
CENTER FOR HOMELAND SECURITY

Public Health Colloquium Discussion-based Exercise

After Action Report

Developed by:



Hosted by:



THIS PAGE INTENTIONALLY BLANK

CONTENTS

PREFACE	4
HANDLING INSTRUCTIONS	4
EXECUTIVE SUMMARY	5
EXERCISE OVERVIEW	7
INTRODUCTION.....	9
FINDINGS	12
ANALYSIS OF OBSERVATIONS.....	17
CONCLUSIONS.....	18
APPENDIX A: AGENDA.....	19
APPENDIX B: PARTICIPANT LIST	21
APPENDIX C: EXERCISE PARTICIPANT DEBRIEF RESULTS	22
APPENDIX D: SESSSION PARTICIPANT EVALUATION RESULTS	22

PREFACE

This exercise was developed by the Integrated Civilian-Military Domestic Disaster Medical Response program of the Yale New Haven Center for Emergency Preparedness and Disaster Response under TCN 09237 funded by the United States Northern Command. This task requires the assessment of the level of effectiveness of integrated planning, training and response approaches to civilian-military medical disaster response via the development, conduct and evaluation of four discussion based exercises. This Colloquium served as the first of the four TCN 09237 exercises.

HANDLING INSTRUCTIONS

1. The title of this document is the University of Colorado at Colorado Springs (UCCS) Public Health Colloquium Discussion-based Exercise After Action Report (AAR).
2. The information gathered in this AAR is *unclassified*.
3. For more information, please consult the following points of contact (POCs):

<p>Michael J. Mozzer, MEP Exercise Lead/Lead Facilitator Yale New Haven Center for Emergency Preparedness and Disaster Response One Church Street, 5th Floor New Haven, CT 06510 203-688-2594 – phone 203-376-7118 – cell 203-688-4618 – fax michael.mozzer@ynhh.org</p>	<p>Amy Kircher, DrPH, MPH Epidemiologist USNORTHCOM-SG 719-554-9387 – phone Amy.kircher@northcom.mil</p>
--	---

EXECUTIVE SUMMARY

As a primary collaborative component of the University of Colorado at Colorado Springs (UCCS) Public Health Colloquium funded by the Defense Threat Reduction Agency (DTRA), the goal of this exercise was to facilitate and evaluate a focused discussion among representatives of various agencies, organizations and disciplines in response to a public health emergency. The Yale New Haven Center for Emergency Preparedness and Disaster Response (YNH-CEPDR), through its Integrated Civilian-Military Domestic Disaster Medical Response (ICMDDMR) Project, designed, developed, conducted and evaluated the exercise. Following the Homeland Security Exercise and Evaluation Program (HSEEP) process, YNH-CEPDR collaborated with subject matter experts from USNORTHCOM to identify an exercise planning team. This exercise planning team oversaw all aspects of the exercise's design and development and approved all exercise content and materials during a series of planning conferences. An Initial Planning Conference (IPC) was held on February 2, 2010, a Mid-term Planning Conference (MPC) was held on February 25, 2010 and a Final Planning Conference (FPC) was held on March 18, 2010. A Controller/Evaluator (C/E) Briefing was conducted on March 23, 2010 with nine participants at which time the Situation Manual and exercise-associated logistics were discussed.

The discussion-based exercise took place over two days and employed three breakout groups. The breakout sessions utilized a smallpox scenario to focus on the management of information associated with detection and fusion, information needs and strategic communications.

Overall, the exercise objectives were fully achieved. Identification of gaps and challenges were reported out on March 24, 2010. Brainstorming and development of proposed actions and processes to address current gaps and challenges was conducted and reported out on March 25, 2010. As a result of this exercise, a foundation for building a federal medical exercise program focused on civilian military integration has been forged.

Major Strengths

- Systems are currently in place to gather information to detect threats and act on these threats appropriately
- Existing processes for vertical sharing of information among civilian and military fusion centers are moderately effective

Primary Areas for Improvement

- The sanitation and vetting of information related to threats is time consuming and may delay the sharing of critical information with those who need it
- A clear public health information communication channel with feedback loops to and from federal, state and local entities is currently lacking and should include greater communication and collaboration among federal, civilian and military entities
- A general lack of standardization in communication strategies may result in variation in messages received and decisions made at the macro and individual levels

- Some of the information available during an actual or potential public health emergency is classified and may not be readily available to decision-makers when it is needed

Recommendations

- Identify methods to standardize and enhance the reporting and sharing of detection information among all stakeholders, including enhancing awareness of and collaboration between fusion resources
- Identify processes to further enhance the sharing of classified information with stakeholders
- Consider development of decision templates at all levels (federal, state, local, military and civilian) with critical information sources and associated data needs for response to public health emergencies
- Develop a clear communication channel with feedback loops to and from federal, state and local entities
- Continue to train and exercise jointly among federal, state, local, military and civilian entities to maintain levels of awareness relative to potential threats
- Determine baseline information requirements to understand “triggers” for recommending and taking action to protect the public’s health in an emergency
- Further utilize fusion centers to quickly disseminate vetted and trusted information

EXERCISE OVERVIEW

EXERCISE NAME:

University of Colorado at Colorado Springs (UCCS) Public Health Colloquium Discussion-based Exercise

LOCATION:

University of Colorado at Colorado Springs

SCENARIO:

The scenario focused on the intentional exposure to smallpox by a terrorist affecting the United States.

TYPE OF EXERCISE:

Discussion-based exercise applying components of a Tabletop Exercise and a Workshop.

OBJECTIVES:

1. Discuss methods and process for sharing initial indications and warnings from medical surveillance and intelligence that an event has occurred.
2. Identify the capacity and methods to receive and share health threat/risk assessment information.
3. Examine the coordination and collaboration needed for strategic communications and discuss the process needed to ensure timely communications among multiple agencies.

EXERCISE DATES:

March 24 and 25, 2010

PARTICIPATING ORGANIZATIONS:

Sponsored by: University of Colorado at Colorado Springs

Funded by: Defense Threat Reduction Agency

Exercise developed by: Yale New Haven Center for Emergency Preparedness and Disaster Integrated Civilian-Military Domestic Disaster Medical Response Project

Participants: See Participant List at Appendix B

NUMBER OF PARTICIPANTS:

- Players: 91

EXERCISE STAFF:

Michael J. Mozzer – Lead Facilitator
Jeff Schlegelmilch – Facilitator
Stewart Smith – Facilitator
Eileen Blake – Evaluator
Elaine Forte – Evaluator
Joanne McGovern – Evaluator

INTRODUCTION

This Public Health Colloquium was sponsored by the UCCS, funded by the DTRA and hosted by NORAD-USNORTHCOM. The scenarios for this discussion-based exercise were developed as part of the ICMDDMR Project by the YNH-CEPDR.

Purpose

The purpose of this Colloquium exercise was for participants to identify issues and highlight the needs related to information gathering and sharing during a public health emergency.

Scope

The scope of the Colloquium exercise was to discuss issues related to the detection of a health threat through surveillance and intelligence, the notification of decision makers that must be made following detection and the communication that must occur with the public.

Exercise Objectives

1. Discuss methods and processes for sharing initial indications and warnings from medical surveillance and intelligence that an event has occurred.
2. Identify the capacity and methods to receive and share health threat/risk assessment information.
3. Examine the coordination and collaboration needed for strategic communications¹ and discuss the processes needed to ensure timely communications among multiple agencies.

Focus Areas

As referenced in the Scope and Purpose sections, this Colloquium exercise discussion was intended to focus on the following three elements:

Detection and Fusion – This focus area is dedicated to the ability to identify a health threat to our country through surveillance and intelligence. One data source may occasionally serve as the focus. However, most events will be identified through a fusion of information available to analysts. Detection and fusion is critical to obtain the earliest warning of an adverse biological event which allows for application of intervention strategies that prevent or minimize human suffering and economic loss.

Notification and Information Needs – This focus area has been created to clarify when notification should occur and who should be notified. Additionally, the information needs of decision-makers drive the information requests. To meet these needs, there must be an understanding of the data that decision-makers will need to inform their decisions.

¹ The multi-disciplinary planning and communication from multiple organizations to the public to relay information and guidance during a public health emergency.

Strategic Communications – Effective communication with the public is necessary to support prevention of a health threat, compliance with public health interventions and minimization of fear. In response to any number of health threats, multiple agencies will be involved from the local through the federal level, as well as across organizations. Given the multitude of players, a coordinated strategic communications plan is essential.

Exercise Structure

During the Colloquium Exercise, participants began in a large group for an introduction to the exercise format, scenario overview and instructions. Participants were then divided into three breakout groups with a focus on one of the three exercise objectives. Each breakout group was led through a series of discussion questions by a facilitator, although the use of a subset or all of the discussion questions was left to the discretion of the facilitator. The primary goal of the facilitator was to ensure the participants were engaged in discussions that centered on the three focus areas.

The discussions were captured by evaluators and data collectors and then reported back to the entire group at the end of the first morning.

On the second morning, participants returned to breakout groups to discuss how the gaps and issues that were identified on day one might be addressed in the future. These discussions were captured by evaluators and data collectors and then reported back to the entire group.

Scenario

Module A

Monday, March 22, 2010 – Hospital emergency departments (EDs), clinics, doctor's offices and other healthcare providers in the Washington, DC area are seeing an increased occurrence of patients presenting with influenza-like illness (ILI): fever, chills, vomiting, headache and backache. A small number of these patients also have a rash on their face and extremities. As flu season has not ended, patients are being sent home with the usual instructions: rest and plenty of fluids. Some patients are being prescribed antivirals. Unaware of the situation in DC, health providers in Los Angeles, Chicago and San Antonio are experiencing similar cases.

Within a few days, many patients return without relief of their symptoms and many display lesions on their face, neck, hands and forearms. In most instances, clinicians begin to suspect a pox-like virus and immediately take steps to isolate the patients, test for the disease and report their suspicions.

Module B

Several days earlier, passengers traveling on Central Europe Airlines flight 19 from Vienna to Washington-Dulles International Airport (Dulles) raised concerns with the flight crew about a fellow passenger who appeared to be quite ill. The passenger, a white male in his early to mid-

thirties, appeared to have a fever, was extremely restless, drifted in and out of sleep throughout the 10-hour flight and made several trips to the rest room. At one point during the flight when passengers were instructed to remain in their seats due to turbulence, the passenger vomited into an air sick bag at his seat. Members of the flight crew asked the passenger several times throughout the flight if he needed medical attention, but he declined. Another passenger recognized that the passenger was speaking Russian and attempted to interpret for the flight crew, but the passenger offered no more information other than the refusal of medical attention. The passenger's condition was reported to the captain, who notified air traffic control in the United States as the flight approached Dulles.

Central Europe Airlines personnel at Dulles were notified, and they in turn identified that the passenger's travel originated at Borispol International Airport in Kiev, Ukraine and that his final destination was to be Los Angeles International Airport (LAX) on Crimson Airlines flight 460.

Upon the flight's arrival at Dulles, the sick passenger was met by representatives from Central Europe and Crimson Airlines who attempted to gather additional information regarding the passenger's illness. Initially, the passenger was uncooperative but when informed that he may not be allowed to board his connecting flight to Los Angeles, the passenger apologized and stated that he had to get to Los Angeles for a relative's funeral and that he had been suffering from food poisoning for the prior 24 hours and that was the cause of his illness. After consulting with senior airline officials at Dulles, the passenger was allowed to board his flight to LA. During this flight, he again exhibited similar symptoms to those observed on the flight from Vienna to Dulles.

Around the time cases began emerging in Washington DC, Los Angeles, Chicago and San Antonio, the passenger in question was found dead in an apartment in the Los Angeles area by local police who were investigating reports of a foul odor coming from the apartment. It appeared that the man had slit his wrists. The man was also observed to have lesions on his face, neck, hands and arms.

Module C

In late March 2010, the police department in Barcelona, Spain receives an anonymous tip that terrorists operating in several European cities, including Amsterdam, Athens, Barcelona, Kiev and Oslo are planning the intentional release of smallpox in Europe, Asia and North America. According to the caller, at least five individual terrorists have intentionally exposed themselves to smallpox and intend to spread the disease by traveling via mass transportation through the targeted regions. Before hanging up, the caller states that, "This attack will be worse than the first."

FINDINGS

Types of Issues	Specific Issues Discussed	Recommendations/Next Steps
Detection and Fusion		
Classification and availability	<ul style="list-style-type: none"> Raw data is not classified Analysis may be classified Forums exist for sharing unclassified data and classified data, but not a good mechanism to share fused data 	<ul style="list-style-type: none"> Set higher thresholds for what material needs to be classified, particularly information that is important to be broadly shared Streamline the process to declassify information Review and possibly revise current classification processes Develop a standardized policy related to sharing of data and information Develop an unclassified version of a classified document concurrently Establish a forum for fusing classified and unclassified data – identify barriers and move forward to eliminate barriers to sharing information Raise awareness of federal supports that exist related to accessing and analyzing data (e.g., CDC)
Overuse	<ul style="list-style-type: none"> All decision-makers have different trigger points; information needs and communication styles 	<ul style="list-style-type: none"> Provide information in a variety of formats to address communication and information sharing preferences Be sensitive to information overload
Horizontal sharing	<ul style="list-style-type: none"> Legal and political barriers exist preventing sharing of data across agencies Competing priorities for resources to enter data into disparate and redundant systems Challenges to reaching consensus on common data platforms, within and among agencies and organizations 	<ul style="list-style-type: none"> Create a common, joint database and consortium of associated experts, in advance of event, to coordinate data collection and information sharing Increase awareness of existing relationships that support data and information sharing Promote collaboration through existing federal funding programs, and replicate best practices developed and identified Educate stakeholders on the importance of sharing information and structures that exist to support this sharing Identify existing data resources that could be leveraged, scaled and adapted to collect and aggregate data from an event
Applicability beyond disease detection	<ul style="list-style-type: none"> Media reports provide a broader level of situational awareness and context 	<ul style="list-style-type: none"> Identify successes, not only from public health, and replicate as appropriate
Awareness of fusion resources	<ul style="list-style-type: none"> Existing Public Health Fusion Center 	<ul style="list-style-type: none"> Increase awareness of fusion resources and capabilities; don't reinvent the wheel
Fusion not occurring effectively or efficiently at any level	<ul style="list-style-type: none"> Fusion centers do exist (although fusion center concept not widely known/understood; not reaching operators) Actionable information not getting to users Public health/medical as "stepchild"; perhaps voluntary – as a result of lack of public health request for validation? No fusion center integration 	<ul style="list-style-type: none"> Train public health analysts and include in fusion centers and in roundtable/decision making Define fusion center and disseminate information on what specific fusion centers can offer Define the actual problem (for example, national security perspective or general public health analysis)

Types of Issues	Specific Issues Discussed	Recommendations/Next Steps
Lack of standardization	<ul style="list-style-type: none"> Variation in terminology/lexicon among responders and decision-makers Training and exercising in silos and addressing various operational objectives 	<ul style="list-style-type: none"> Create and implement an accessible online dictionary (decide – agree on common dictionary or compile all dictionaries in one place) Conduct joint exercises and training (involving all levels of staff) Employee swaps Conduct a workshop series to introduce and socialize different communities of interest and slowly move toward an understanding/common definition of ideas Bring in external communities (different “universes” that will become a part of these issues – e.g. media) Overcoming a “lack-of” requires a “mandatory” (couched in incentives...)
Surveillance	<ul style="list-style-type: none"> Different agencies, different missions/focus Reliant on astute clinicians Not enough analytical capacity to review all data Different kinds of noise will exist pre-diagnosis from post-diagnosis What is baseline? Developing common case definitions across agencies may be challenging Focus efforts to gather information that supports necessary decision-making 	<ul style="list-style-type: none"> Build additional capacity and capability related to human analysis Standardize information captured and process for sharing Standardize definitions of syndromes/symptoms Create a forum to raise awareness of the non-human analytical components currently in use Develop cooperative data analysis strategies Identify sources of data and their strengths Standardize/refine definitions – this may impact data trending; requires careful thought Clarify additional or revised data collection requirements
Disease reporting rules among state and local governments	<ul style="list-style-type: none"> Difficulty with fusing information nationally Some variation in reporting thresholds may be due to geographic variation Biosurround system architecture is under discussion; National Biosurveillance Coordination Unit (CDC) is lead 	<ul style="list-style-type: none"> Increase awareness of variability among reporting thresholds for each health district Increase understanding of variability related to data collection methods in different regions Increase awareness of what data is important to decision-makers and how data is used Ensure patient privacy is secured Consider a surveillance program populated by school nurses; need to consider regional uniqueness Enhance fusion of animal and human disease data Enhance joint analytical capability of animal and human surveillance/disease data Consider developing and implementing self-reporting systems
Decision-maker use of information	<ul style="list-style-type: none"> Leaders have different information needs; have different responsibilities and will need to make varied decisions 	<ul style="list-style-type: none"> Define thresholds of information that leaders need Define what information is needed to make best decisions Identify sources of quality data to enhance decision-making Present data clearly and in a manner that is readily understandable (KPU – known, presumed, unknown) Define potential impacts and recommendations for next courses of action
Perishable data sources	<ul style="list-style-type: none"> Airline passenger manifest (international) Data may not exist (e.g., H1N1 laboratory testing or doctor visit didn't occur) Changing case definitions may modify types of data collected (either more or less); may be based on limited resources for collecting data 	<ul style="list-style-type: none"> Identify important data and sources and develop approaches to archiving perishable data Keep an open mind about what data might be important Employ lessons learned for future data collection (types and methods) – what data contributed to better decision-making

Types of Issues	Specific Issues Discussed	Recommendations/Next Steps
Selective sharing of information	<ul style="list-style-type: none"> • Classification • Policies that prohibit sharing 	<ul style="list-style-type: none"> • Consider establishing a Wiki • Develop methods to provide as much unclassified information to the stakeholders as possible • Implement approaches to declassify information as much as possible • Continue to build networks and relationships with response partners in advance of an emergency • Identify the standard list of “baseline information” as it relates to strategic communications (on point-in-time) • Establish baseline information requirements to understand “triggers” and assist with prevention.

Types of Issues	Specific Issues Discussed	Recommendations/Next Steps
Notification and Information Sharing		
Preparation for response	<ul style="list-style-type: none"> • There is a wide variety of information available • Need to determine suspected disease and associated immediate actions at the local level 	<ul style="list-style-type: none"> • Continue to develop ongoing voluntary resource reporting systems • Identify accurate and complete information sources • Develop a network for accurate and appropriate information at both the clinician and federal level • Determine trusted sources for information in an emergency event • Work at state health department level to communicate expectations at outbreak to local departments of health, hospitals and clinicians
Risk communications	<ul style="list-style-type: none"> • Lack of tiered communication strategy defined based on what information is on hand (high, moderate, low risk) • What needs to be communicated to the local level to produce appropriate actions and reduce strain on the healthcare system? • When is follow-up information provided? 	<ul style="list-style-type: none"> • Develop clear strategic communication strategy • Identify accurate and complete information sources • Identify local providers to serve as credible spokespersons to the public • Identify local actions with accurate and specific information to reduce panic potential
Resource allocation	<ul style="list-style-type: none"> • Determine available resources and associated funding • Determine objectives associated with any declaration • Identify relevant countermeasures as applicable, as well as time for release and basis for decision 	<ul style="list-style-type: none"> • Continue to utilize exercises and training to provide experience and knowledge to prepare for response

Types of Issues	Specific Issues Discussed	Recommendations/Next Steps
Strategic Communications		
Timing and efficacy of communications	<ul style="list-style-type: none"> Timing required for appropriate response (e.g. flu vs. smallpox) can create associated challenges in decision making 	<ul style="list-style-type: none"> Determine who is in charge for response (e.g. CDC for flu) and have them serve as sole source of information to public and healthcare providers Ensure the correct person and personality provided to portray a risk message Determine when and how frequently updates should be provided
Framework for communications	<ul style="list-style-type: none"> Civilian, federal and military relations require a framework for response and communications 	<ul style="list-style-type: none"> Develop appropriate feedback loops for communication among various entities involved in response
Messages	<ul style="list-style-type: none"> CDC has pre-scripted risk communications messages Leaders are not involved in exercising of plans and associated messages 	<ul style="list-style-type: none"> Ensure adequate communication, exercises and training relative to existing risk communication resources
Rarely occurring events	<ul style="list-style-type: none"> It is challenging to get providers to exercise and train for rarely occurring events. Hospital medical chiefs of staff are critical to communications 	<ul style="list-style-type: none"> Utilize exercise and training to prepare for rare events

ANALYSIS OF OBSERVATIONS

Detection and fusion:

Issues: While vertical sharing of information among civilian and military fusion centers is somewhat effective, there is information overload. This issue is compounded by variation among state and local government processes, culture, data and other elements. Information critical to detection and fusion of knowledge is frequently classified and not always provided to those in positions to inform or make decisions at the local level.

Recommendations:

- Identify methods to standardize and enhance the reporting and sharing of detection information among all stakeholders, including enhancing awareness of and collaboration between fusion resources
- Identify processes to further enhance the sharing of classified information with stakeholders
- Consider development of a decision template with critical information sources and associated data needs for all hazards events

Information needs:

Issues: Systems are in place to gather information to detect threats and act on these threats appropriately. Ultimately the receipt of information relative to a threat often depends on a single point such as an astute clinician picking up on a symptom and communicating a concern to the right entity. The disparate nature of information sources in and of itself is a confounding variable to effective decision-making. Finally, decision-making trigger thresholds are dependent on confirmed information which frequently takes significant time to validate.

Recommendations:

- Develop a clear communication channel with feedback loops to and from federal, state and local entities
- Continue to train and exercise jointly to maintain levels of awareness relative to potential threats

Strategic Communications:

Issues: Information is selectively shared depending on classification category and dissemination channels. A general lack of standardization in communication strategies may result in variation in messages received and decisions made at the macro and individual levels. The sanitation and vetting of information related to threats is time-consuming.

Recommendations:

- Determine baseline information requirements to understand “triggers” and assist with prevention aspects
- Continue to utilize workshop formats to bring groups together to align processes
- Further utilize fusion centers to quickly disseminate vetted and trusted information

CONCLUSIONS

Overall, the exercise objectives were fully achieved. Brainstorming of issues followed by the development of proposed required actions and processes to address current gaps and challenges was conducted and reported out. As a result of this exercise a foundation for building a federal medical exercise program focused on civilian military integration has been forged.

Major Strengths

- Systems are currently in place to gather information to detect threats and act on these threats appropriately
- Existing processes for vertical sharing of information among civilian and military fusion centers are moderately effective

Primary Areas for Improvement

- The sanitation and vetting of information related to threats is time consuming and may delay the sharing of critical information with those who need it
- A clear public health information communication channel with feedback loops to and from federal, state and local entities is currently lacking and should include greater communication and collaboration among federal, civilian and military entities
- A general lack of standardization in communication strategies may result in variation in messages received and decisions made at the macro and individual levels
- Some of the information available during an actual or potential public health emergency is classified and may not be readily available to decision-makers when it is needed

Recommendations

- Identify methods to standardize and enhance the reporting and sharing of detection information among all stakeholders, including enhancing awareness of and collaboration between fusion resources
- Identify processes to further enhance the sharing of classified information with stakeholders
- Consider development of a decision templates at all levels (federal, state, local, military and civilian) with critical information sources and associated data needs for response to public health emergencies
- Develop a clear communication channel with feedback loops to and from federal, state and local entities
- Continue to train and exercise jointly among federal, state, local, military and civilian entities to maintain levels of awareness relative to potential threats
- Determine baseline information requirements to understand “triggers” for recommending and taking action to protect the public’s health in an emergency
- Further utilize fusion centers to quickly disseminate vetted and trusted information

APPENDIX A:

AGENDA

WEDNESDAY, 24 MARCH 2010

7:00 A.M.	Registration/Breakfast
8:00 A.M.	Opening Kurt Johnson, JD, LLM, Center for Homeland Security Amy Kirchner, DrPH (candidate), MPH, N-NC/SG
8:15 A.M.	Welcome Col Jay Neubauer, N-NC/SG
8:30 A.M.	TTX: Introduction Michael Mozzer, MEP Yale New Haven Center for Emergency Preparedness and Disaster Response
8:45 A.M.	TTX: Identification of Gaps
10:00 A.M.	Break
10:20 A.M.	TTX: Obstacles and Barriers
11:15 A.M.	TTX: Report out

THURSDAY, 25 MARCH 2010

7:00 A.M.	Breakfast
8:00 A.M.	UCCS Welcome Chancellor Pamela Shockley-Zalabak, PhD
8:15 A.M.	Keynote: General Victor E. Renuart, Commander, NORAD-US NORTHCOM
10:30 A.M.	Break
8:45 A.M.	TTX: Vision/Strategy and Action Plan
12:30 P.M.	Lunch and Report Out
1:30 P.M.	Conclusion

APPENDIX B:

PARTICIPANT LIST

21 AMDS	Joint Staff, J-4 Health Service Support Division
Academy Women's Healthcare Assoc.	Martin-Blank and Associates
Ackcellent Consulting LLC	Mountain Technical Field Services, LLC
Battelle	MRCEPC
Center for Homeland Security	National Sheriffs Association
Centers for Disease Control and Prevention	NORAD- USNORTHCOM
CIP-Consulting.com	NORAD-USNORTHCOM J5
Colorado Amateur Weightlifting	NORAD- USNORTHCOM J84
Colorado Department of Public Health & Environment	NORAD- USNORTHCOM/JIOC-N/J24S
Colorado School of Public Health	NORAD- USNORTHCOM Surgeon General Office
Defense Threat Reduction Agency	NORAD-USNORTHCOM Commander
Department of Health and Human Services	NORTHCOM Regional Center for Defending Homelands
Department of Health and Human Services/Assistant Secretary for Preparedness and Response	Supporting Civil Authorities
Department of Defense Health Affairs (FHP&R)	Office of Health Affairs
El Paso County Dept of Health and Environment	OLI/Health Vision Council
El Paso County Emergency Management	Pacific Northwest National Laboratory
El Paso County Medical Society	Panhandle Health District
Engineering Technical Writer	Peak Vista Community Health Center
EP&R International	Pikes Peak Community College
Evenstar Internal Medicine PC	SAIC
Federal Emergency Management Agency Fusion Center, Booz Allen Hamilton	University of Colorado at Colorado Springs
Federal Emergency Management Agency/Department of Homeland Security	US Army
Google	US Navy
Harvard Opinion Research Program	Village at Skyline
Homeland Security Careers	Yale New Haven Hospital Department of Emergency Medicine
JHU/APL	Yale New Haven Center for Emergency Preparedness and Disaster Response
Joint Project Manager Guardian	Yale University, Yale-New Haven Hospital

APPENDIX C:

EXERCISE PARTICIPANT DEBRIEF RESULTS

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	No Answer	Rating Average
The exercise was well structured and organized	38.9% (14)	58.3% (21)	2.8% (1)	0.0% (0)	0.0% (0)	0.0% (0)	4.36
The facilitator was knowledgeable about the material, kept the exercise on target and was sensitive to group dynamics	50.0% (18)	47.2% (17)	2.8% (1)	0.0% (0)	0.0% (0)	0.0% (0)	4.47
As a result of this exercise I believe that actions will be taken to increase public health preparedness	11.1% (4)	30.6% (11)	44.4% (16)	11.1% (4)	0.0% (0)	2.8% (1)	3.43
This exercise identified methods and processes for sharing initial indications and warnings from medical surveillance and intelligence	14.3% (5)	57.1% (20)	25.7% (9)	0.0% (0)	0.0% (0)	2.9% (1)	3.88
This exercise assisted in identification of capacity and methods to receive and share health threat/risk assessment information	14.7% (5)	61.8% (21)	23.5% (8)	0.0% (0)	0.0% (0)	0.0% (0)	3.91
This exercise examined the coordination and collaboration needs for strategic communications and processes to ensure timely communications among multiple agencies	36.1% (13)	47.2% (17)	5.6% (2)	8.3% (3)	0.0% (0)	2.8% (1)	4.14

APPENDIX D:

SESSION PARTICIPANT EVALUATION RESULTS

A web based Colloquium evaluation was emailed to participants by the UCCS following the event. Twenty-four responses were received and are provided here. It should be noted that the exercise portion of the Colloquium was only a portion of the event but given the number of comments associated with the exercise, the evaluation results are included here for reference.

Please rate this event on the following:							
Answer Options	Excellent	Above Average	Average	Below Average	Poor	Rating Average	Response Count
Overall agenda	12	11	1	0	0	1.54	24
Keynote speakers	10	11	3	0	0	1.71	24
Informational presentations	8	11	5	0	0	1.88	24
Breakout Groups	14	8	2	0	0	1.50	24
Networking opportunities	14	9	1	0	0	1.46	24
Social events	8	8	3	0	0	1.74	19
Event location & venue	13	6	3	2	0	1.75	24
Food served at event	9	8	5	2	0	2.00	24

What did you enjoy or value most about this event?

- Breakout
- Enjoyed the speakers most
- Networking and learning
- Meeting others
- The location, set up and catering provided by the University were fantastic. The entire event provided lots of networking opportunities and professional development.
- The variety of people and their desire to discuss the issues
- The organizers were very perceptive that many of these issues had not been looked at in any depth prior to this event.
- The opportunity to hear what other agencies are doing to prepare for emergencies and how they would respond in the event of another one
- The topic. It was new to me and I ate it up.
- Yale-New Haven Exercise Groups...the facilitators were excellent and the group discussions were informative and insightful.
- The open discussions and the open minds of the participants. People wanted to know how to improve communication and spent no time defending methods already in place.
- I didn't realize there were going to be people there from all over the country. The thought of being able to give input on a subject that might generate new SOP's, new policy, or something is very exciting.
- Information shared during breakout groups
- Getting to meet new folks with interest and significant knowledge in the problem area addressed
- The ability to meet various people working in the public health industry and military personal. I really liked the PowerPoint presentations; would have liked to see all presenters use. Was glad that Google was there.
- The breakout sessions/exercise. It was outstanding!
- Google presentation
- Meeting new people and getting a little "education"

- Interaction and to see old familiar faces
- Great speakers with great depth and experience
- Topic and breakout that forced interaction with colleagues
- Meeting people with an interest in public health and from UCCS

Do you have any suggestions about improving this event?

- More quest speakers
- Improve the IT support for presentations
- Increase the number of local EMS, law enforcement and political representatives (Governor's staff)
- Invite more key people from local law enforcement, emergency responders, etc. as well.
- Event was a little anti-climatic at the end. After the last breakout session report, the leader asked for question/comments. But that was directed toward that breakout subject. I would have liked the event to wrap up not only with suggestions for what we could do as individuals to take action, but to also have a brainstorming session as a group regarding what we could do to continue the discussion and follow up on actions.
- Add another small group discussion to the agenda and mix the participants so that we have an opportunity to talk with/listen to the other participants not in our Yale-New Haven exercise group.
- More breakouts
- Yes! The goal of the event was to work on improving the sharing of information from the federal level to the local level, to the people in the trenches. Ninety percent of the participants belonged to the federal level. Promoting this event more with public health departments could have raised participation from the local level, which would have generated much livelier discussions that may have led to even better solutions.
- I was just there for the opening social event and could not attend the second, but it would have been nice if presenters were there and would have been identified somehow. The first evening, the Yale New Haven group was there, but I didn't realize they were facilitating the event until much later.
- Excellent with great topics and presenters
- Have the next event at a hotel. The university setting subjected everyone to the bureaucracy of navigating technology set up issues, etc.
- I think for info. sharing & fusion/detection. Many of the attendees could have used a "101" type course to understand the current programs & realities as part of a pre-conference workshop.
- There needs to be a document put out with responsibilities as to who is going to do what.
- Better food to include more vegetables and fruits, perhaps healthier sandwiches like tuna fish or chicken salad.

Will you attend this event again next year?		
Answer Options	Response Percent	Response Count
Yes	83.3%	20
No	0.0%	0
Maybe	16.7%	4

Please add any further comments about this event or ideas for future events.

- Hosts did an excellent job of modifying the agenda after the weather delay, and did an outstanding job of selecting participants from a broad range of related disciplines.
- Have a session at the outset that develops the assumptions and models we are using to define "the problem."
- I don't want to wait a year to continue my involvement with this exciting area. I suggest setting up a networking board of some sort, perhaps a LinkedIn subgroup, or an individual webpage.
- I would love to see an AAR come out of this event, along with a continuum of action and further discussion that builds on what was created at this year's colloquium.
- As a PIO in a local public health district, I was encouraged to find out how important the sharing of communication is with people at the federal level. I would suggest following this colloquium up with a gathering designed to start action on a framework for a national communication plan. As I update my health district's communication and response plan following the H1N1 experience, I'm thinking that taking the best practices from plans from all levels could result in a "template" for a national plan that improves internal communication a few notches. In my experience, public information isn't the challenge; remembering to communicate with partners and deciding what information to share is.
- Food: I'm not much of a sandwich person, but it was all fresh and well done. Facilities: Nice rooms, but the breakout rooms were in other buildings and in the weather. It was less than 100% but it was functional and worked out. Presentations: The technology was a huge problem. Frankly, I missed hearing a lot. Not that the mics always worked, but frequently speakers yelled, can you hear me? and then spoke in their regular soft voice. Google was the worst. I think his presentation would have been great, but couldn't hear and he wasn't the best speaker. I'm glad public health is looking at the issue of communication and is hopefully ready to start making changes so they can get on the same page.
- Would like to invite a AFHSC rep, a federal animal disease surveillance SME, and an FDA and USDA APHIS emergency response coordinator. Would like to incorporate more "One Health" stakeholders into the fusion breakout group.
- Collaboration is a team effort. Would like some continuation based on data collection for the effective actions between public, private and military. Excellent Colloquium, even from someone who has never worked in this sector. I really enjoyed networking with various presenters and attendees.
- Again - have it at a hotel. If you're going to have an exercise, allow for more time for the breakouts.
- Good sessions, good group, good intent but, as always with things like this, we need to see some actionable results.
- More updates about different emergency preparedness, more local and state level officials to round out the federal presentation. You did a great job with the various speakers - keep up the great work.
- The agenda and responses of the groups were pre-scripted too much by the New Haven facilitators.
- The New Haven reps were good facilitators but didn't have the subject matter expertise, yet acted like they did.
- Again - have it at a hotel. If you're going to have an exercise, allow for more time for the breakouts.
- Good sessions, good group, good intent but as always with things like this, we need to see some actionable results.
- More updates about different emergency preparedness, more local and state level officials to round out the federal representation. You did a great job with the various speakers- keep up the great work.
- The agenda and responses of the groups were prescribed too much by the New Haven facilitators
- The New Haven reps were good facilitators but didn't have subject matter expertise, yet acted like they did.

THIS PAGE INTENTIONALLY BLANK